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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,900	03/12/2004	Matthew Waight	MAXIM-01600	8303
79206                      7590                      05/26/2010 HAVERSTOCK & OWENS LLP 162 NORTH WOLFE ROAD SUNNYVALE, CA 94086				
EXAMINER				
TRAN, PABLO N				
ART UNIT		PAPER NUMBER		
2618				
MAIL DATE		DELIVERY MODE		
05/26/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/799,900

**Applicant(s)**

WRIGHT ET AL.

**Examiner**

Pablo N. Tran

**Art Unit**

2618

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6, 7 and 10-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 5 and 39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-9, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Pat No 20040116096) and in view of Anderson (US Pat No 5,543,756) and in view of Watters at al. (hereinafter "Watters", US Pat No 7,034,660).

As per claims 1, 3, 8, and 37, Shen disclose an integrate circuit comprising a first amplifier (see fig. 1/no. 15); a first oscillator (see fig. 1/no. 21); a first mixer (see fig. 1/no. 19); a second oscillator (see fig. 1/no. 28); a second mixer (see fig. 1/no. 27); a second amplifier (see fig. 1/no. 25); a serial control module (fig. 5/no. 128); an intermediate filter (see fig. 1/no. 23, fig. 3/no. 80); wherein the IF filter include a first filter stage, the first filter stage further including a first adjustable capacitor array (see fig. 4, fig. 5, fig. 6, fig. 7), the first adjustable capacitor array having an effective capacitance value adjustable through use of a first plurality of programmable data storage locations (see 0028, 0030).

Shen IF filter does not incorporate an LC resonator. However, Anderson IF filter utilize an LC resonator (see fig. 4/no. 8, fig. 7/no. 5). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of invention for Shen to incorporate an LC resonator, as taught by Anderson, to provide a constant gain while still providing a low noise figure.

The modified IF filter of Shen and Anderson does not disclose that the capacitance value is adjust through the use of fuses. However such method is taught by Watters (see fig. 3D, fig. 3E). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Shen and Anderson to utilize such method to adjust the capacitance value, as taught by Watters, to utilize the fuses to set the capacitors.

As per claims 2 and 9, the modified IF filter of Shen, Anderson, and Watters further disclose a second adjustable capacitor array (see Shen fig. 4, fig. 5, fig. 6, fig. 7).

As per claim 38, the modified IF filter of Shen, Anderson, and Watters further disclose the first plurality of programmable data storage locations are programmable through a serial control interface of the integrated circuit (see Shen 0028, 0030).

### ***Allowable Subject Matter***

3. Claims 5 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

4. Applicant's arguments filed 02/01/10 have been fully considered but they are not persuasive.

The Applicant's stated that, "Neither Shen, Andersen, Watters, or their combination teach a filter for use in integrated circuit comprising a plurality of data storage locations programmable through a serial interface. Shen disclose a capacitor array (fig. 5, paragraph 0028) wherein the capacitance value can be program to adjust by digital control (programmable data storage locations) through the binary-weight switch (serial interface). Given the broadest interpretation of the claim limitation is met. Therefore, the rejection is proper.

The Applicant's stated that, "The combination of Shen, Andersen, and Watters is improper. Shen disclose such an IF filter that comprises a capacitor array (fig. 4-7) but not coupling to LC resonator. Andersen disclose such IF filter having capacitance array coupled to LC resonator in order to tune out stray capacitance while provide a constant gain while still providing a low noise figure. Shen disclose such method of adjusting the capacitance value but not specifically through the use of fuses. Watters disclose such integrated circuit that utilizes such method (see fig. 3D/no. 185) in order to establish resonate frequency sufficiently far apart from each other. Therefore, the combination is proper.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should You have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

May 24, 2010

/Pablo N Tran/

Primary Examiner, Art Unit 2618